REMARKS

Claims 1-14 are amended, no claims are canceled, and claims 17-20 are added; as a result, claims 1-20 are now pending in this application.

No new matter has been added through the amendments to claims 1-14. Support for the amendments to claims 1-14 may be found throughout the specification, for example but not limited to, the specification at page 1, line 1 through page 3, line 3, and at page 4, lines 3-4.

No new matter has been added through new claims 17-20. Support for new claims 17-20 may be found throughout the specification, for example but not limited to, the specification at page 1, line 1 through page 3, line 3, and at page 4, lines 3-4, and claims 1 and 3-5 as originally filed in the application.

In the Specification

The specification has been amended to include a statement regarding the priority claim for this application.

§112 Rejection of the Claims

Claim 1 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Specifically, the Office Action on page 2 states,

> Claim 1 is indefinite because the claim language "containing the control words in an encrypted manner using a second key" is insufficient antecedent basis without a first key being recited for this limitation in the claim. (Emphasis in original).

Claim 1 as now amended includes,

> wherein at least the first type of content signals is scrambled using control words serving **as first keys** for scrambling to obtain a scrambled program signal and wherein the scrambled program signal is provided together with entitlement control messages (ECMs) containing the control words in an encrypted manner using **a second key**.

Thus, claim 1 includes both, "control words serving as first keys," and includes, "a second key." Applicant submits that the language of claim 1 complies with the requirements of 35 U.S.C. § 112, second paragraph, and overcomes the objection raised in the Office Action with respect to claim 1. Therefore, Applicant respectfully requests withdrawal of the rejection, and allowance of all claims currently pending in the application.

§103 Rejection of the Claims

Claims 1-11 and 13-16

Claims 1-11 and 13-16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Maillard (EP 0912052 A1) in view of Morrison (U.S. 5,815,671) and in view of Wendorf (U.S. 5,469,431). Applicant respectfully traverses the rejection of claims 1-11 and 13-16.

Applicant maintains each of the arguments provided in Applicant's previous response[1] with the exception of any reference to claim 1 as a method claim or as including a method. As noted in the above mentioned previous response, Applicant stated,[2]

> Applicant respectfully submits that claims 1-11 and 13-16 are not obvious, and thus are patentable, over the proposed combination of Maillard, Morrison, and Wendorf because this proposed combination fails to disclose or suggest all of the claimed subject matter included in claims 1-11 and 13-16.

Further, Applicant's above mentioned pervious response also stated,[3]

> However, Morrison teaches a system whereby program material is stored in decoded form, whilst Maillard teaches a system aimed at ensuring that digital data is securely recorded so that it cannot easily be used to generate pirate copies (*See* Maillard, column 2, lines 22-24). Hence, the two systems are incompatible, and the skilled person has no incentive to combine them.
>
> Further, Wendorf discloses aims relating to the maximisation of the utilisation of spectrum capacity in a multi-service digital transmission system (*See* Wendorf at column 2, lines 8-11), involving the minimisation of transmission overhead (*See* Wendorf at column 2, lines 23-37), and a time-varying allocation of channels in a multi-channel, multi-frequency band transmission system (*See* Wendorf at column 2, lines 12-13). Such objects are largely unrelated to the problem of controlling the use of a program signal in a system comprising a number of receivers so as to ensure that a receiver receives a targeted program signal in an efficient manner. Thus, one of ordinary skill in the art would not have an incentive to combine Wendorf with Maillard or Morrison to arrive at the claimed subject matter included in claims 1-11 and 13-16.

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[1] *See* Applicant's response mailed June 26, 2006 at pages 7-12 made in reply to the Final Office Action mailed April 25, 2006 in this application.
[2] *See* Applicant's response mailed June 26, 2006 at page 7.
[3] *See* Applicant's response mailed June 26, 2006 at page 12.

> For at least the reasons stated above, those of ordinary skill in the art would have no incentive to combine the teachings of Maillard, Morrison, and Wendorf as suggested in the Final Office Action, and thus the Final Office Action fails to state a *prima facie* case of obviousness with respect to claims 1-11 and 13-16.

Applicant maintains each of the above arguments, and the arguments as presented on pages 7-12 of Applicant's above mentioned previous response, wherein claims 1-11 and 13-16 are not obvious in view of the proposed combination of Maillard, Morrison, and Wendorf, and the Final Office Action[4] fails to meet its burden for establishing a *prima facie* case of obviousness with respect to claims 1-11 and 13-16.

The currently pending Office Action[5] relies on this same proposed combination of Maillard, Morrison, and Wendorf in again rejecting claims 1-11 and 13-16. The currently pending Office Action appears to provide almost the same arguments in using the proposed combination of Maillard, Morrison, and Wendorf, in now rejecting claims 1-11 and 13-16, as was used in the above mentioned Final Office Action. The exception to this same rejection appears to be some different language in the first portion of the last full paragraph starting about the middle of page 4 of the currently pending Office Action.

In addition to the arguments provided in Applicant's above mentioned previous response, and in consideration of the apparent new arguments as provided on page 4 of the currently pending Office Action, Applicant offers the addition observations with respect to the now pending 35 U.S.C. § 103(a) rejection of claims 1-11 and 13-16 in view of the proposed combination of Maillard, Morrison, and Wendorf.

Claim 1 as now amended includes,

> **a number of receivers, at least some of the receivers having a storage medium to store program signals, wherein the program signals comprise content signals of a first and a second type**, wherein the second type of content signals is inserted in time slots in the first type of content signals, wherein at least the first type of content signals is scrambled using control words serving as first keys for scrambling to obtain a scrambled program signal and **wherein the scrambled program signal is provided**

[4] *See* the Final Office Action mailed April 25, 2006 in this application.
[5] *See* the non-final Office Action mailed September 18, 2006 in this application.

> **together with entitlement control messages (ECMs) containing the control words in an encrypted manner** using a second key,
>
> a decryptor provided at each receiver for retrieving the control words from the ECMs by decrypting the ECMs, and wherein the control words are delivered by the decryptor for descrambling the program signal, and **wherein at least a plurality of said ECMs containing the control words in an encrypted manner further comprises control information to control the decryptor in such a manner that the decryptor processes ECMs to deliver decrypted control words for descrambling at least the first type of content signals so as to maintain at least the time slots for second type of content signals in the first type of content signals during playback of the program signal.** (Emphasis added).

Thus, claim 1 includes, "a number of receivers, at least some of the receivers having a storage medium to store program signals, wherein the program signal comprises content signals of a first and a second type, . . . wherein the scrambled program signal is provided together with entitlement control messages (ECMs) containing the control words in an encrypted manner." The subject matter included in claim 1 deals with a system to control the use of a program signals, comprising a number of receivers, at least some of the receivers having a storage medium to store program signals, wherein the program signal comprises two types of content signal, typically the "real" content (such as a movie) and advertisements, in which program signal time slots for the second type of content signal are protected against unauthorised removal or modification. Such protection is obtained by means of specific information in the ECMs and descrambling using that information in such a manner that the time slots for the second type of content signal in the first type of content signal are maintained during playback. The information in the ECMs is for instance timing information that interrupts playback of the first type of content signal for a given time period, or sequence numbers of the pieces of content that are to be played back in the following time period.

In contrast to claim 1, Maillard deals with the recording of encrypted digital data. Scrambled data is transmitted as a signal together with control words for descrambling of the digital data, the control words are themselves encrypted by a key. After reception of the signal, the data is recorded in its still scrambled form on a recording medium, whereas the control words are decrypted. The decrypted control word is thereafter re-encrypted by means of a second key

and the re-encrypted control word is recorded together with the scrambled data on the digital recording medium. When replaying, the control word is decrypted by means of the second key and thereafter used to descramble the recording.

A major difference between Maillard and the subject matter of claim 1 is that in Maillard, only content and ECMs are distinguished in the scrambled signal. However, in the subject matter included in claim 1, a signal contains a first type of content signal and a second type of content signal, **and additionally** ECMs. In the present application, by 'content signal' is meant the signal that is to be presented to the user, as will be clear from page 1, line 31 - page 2, line 3 in the specification of the present application. Content signals of a second type are exemplified by 'advertisement signals', for example as in page 2, lines 1-3 in the specification of the present application. In the Office Action, the ECMs (containing control words) in Maillard are indicated as "second type of content signal". It will be clear that this is a meaning of content differing from that used in the claims of the present application.

Therefore, in contrast to what is suggested by the Office Action, Maillard fails to describe or suggest, "a number of receivers, at least some of the receivers having a storage medium to store program signals, wherein the program signal comprises content signals of a first and a second type, . . . wherein the scrambled program signal is provided together with entitlement control messages (ECMs) containing the control words in an encrypted manner," as required by claim 1.

Applicant's representatives fail to find in, and the Office Acton fails to point out in the additional documents of Morrison and Wendorf, this subject matter as included in claim 1 and missing from Maillard. Thus, the Office Action fails to show how the proposed combination of Maillard, Morrison, and Wendorf discloses or suggests at least this subject matter as included in claim 1.

In another example of subject matter not disclosed or suggested by the proposed combination of Maillard, Morrison, and Wendorf, claim 1 also includes,

> wherein at least a plurality of said ECMs containing the control words in an encrypted manner further comprises control information to control the decryptor in such a manner that the decryptor processes ECMs to deliver decrypted control words for descrambling at least the first type of content signals so as to

> maintain at least the time slots for second type of content signals in the first type of content signals during playback of the program signal.

The Office Action on page 4 admits that Maillard does not disclose this subject matter, but relies on Morrison for a teaching of the subject matter included in claim 1 and admittedly missing from Maillard.

In contrast to claim 1, Morrison deals with the presentation of various materials, such as advertisements or news messages, in a content signal (of a first type) by using insertion of flags (for a signal of a second type, viz. the various materials) in the content signal of the first type. Morrison distinguishes program break flags and message code flags, the program break flags indicating where to insert an advertisement, and the message code flags indicating which advertisement is to be inserted.[6]

In Morrison, the flags (serving as information for controlling when the content of the second type is to be presented, as in the present application) are "inserted as auxiliary information transmitted and stored along with the program materials."[7] There is no disclosure or suggestion of inserting the flags into the ECMs, as is the case with the subject matter of claim 1. Moreover, after descrambling the data stream containing the program material, the flags are still present in the program material.[8] This is not possible if the flags are in the ECMs, since descrambled material does not contain ECMs. Therefore, the statement in the Office Action that, "Morrison teaches (a) at least a plurality of said ECMs containing the control words in an encrypted manner further comprises control information to control the decrypting means in such a manner that at least the time slots for second type of content signals are maintained in the first type of content signals,"[9] is not supported by Morrison.

Thus, Morrison fails to disclose or suggest, "wherein at least a plurality of said ECMs containing the control words in an encrypted manner further comprises control information to control the decryptor in such a manner that the decryptor processes ECMs to deliver decrypted control words for descrambling at least the first type of content signals so as to maintain at least

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[6] *See* Morrison at column 3, lines 39-48.
[7] *See* Morrison at column 3, lines 42-43.
[8] *See* Morrison at column 3, line 67 - column 4, line 13; column 5 lines 1-27.
[9] *See* the Office Acton at page 4.

the time slots for second type of content signals in the first type of content signals during playback of the program signal," as required by claim 1.

As noted above, the Office Action admits that Maillard does not disclose this subject matter. Further, Applicant's representatives fail to find in, and the Office Acton fails to point out in the additional document of Wendorf this subject matter as included in claim 1 and missing from Maillard and Morrison. Thus, the Office Action fails to show how the proposed combination of Maillard, Morrison, and Wendorf discloses or suggests at least this subject matter as included in claim 1.

For at least the reasons stated above, the proposed combination of Maillard, Morrison, and Wendorf fails to disclose or suggest all of the subject matter included in claim 1, and so the Office Action fails to meet its burden for establishing a *prima facie* case of obviousness with respect to claim 1.

Claims 2-11 and 13 depend from claim 1, and therefore include all of the claimed subject matter as recited in claim 1. For at least the reasons stated above with respect to claim 1, the proposed combination of Maillard, Morrison, and Wendorf fails to disclose or suggest all of the claimed subject matter included in claims 2-11, and 13.

The subject-matter of claim 14 is not obvious, and thus is patentable, over the proposed combination of Maillard, Morrison, and Wendorf by virtue of the fact that it involves a receiver for carrying out the method of claim 1, which, for at least the reasons stated above, is not obvious in view of the proposed combination of Maillard, Morrison, and Wendorf. Claims 15-16 depend from claim 14, and therefore include all of the claimed subject matter recited in claim 14. For at least the reasons stated above with respect to claim 14, the proposed combination of Maillard, Morrison, and Wendorf fails to disclose or suggest all of the claimed subject matter of claims 15-16.

Because the proposed combination of Maillard, Morrison, and Wendford fails to describe or suggest all of the subject matter included in claims 2-11 and 13-16, the Office Action fails to meet it burden for establishing a *prima facie* case of obviousness with respect to claims 2-11 and 13-16.

In addition, for at least the resaons stated above and stated in Applicant's previous response, the Office Action fails to meet the reqirements for forming the proposed combination

of Maillard, Morrison, and Wendorf, and so in this respect also fails to meet its burden for establishing a *prima facie* case of obviousness with respect to claims 1-11 and 13-16.

Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection of claims 1-11 and 13-16, and allowance of all claims pending in the application.

§ 103(a) Rejection of claim 12

Claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Maillard (Patent No. EP 0912052 A1) in view of Morrison (U.S. 5,815,671) and in view of Wendorf (U.S. 5,469,431) and in view of Takahisa et al. (U.S. 5,577,266). Applicant respectfully traverses the rejection of claim 12.

Claim 12 depends from claim 1, and therefore includes all of the claimed subject matter recited in claim 1. Applicant believes they have established that the proposed combination of Maillard, Morrison, and Wendorf fails to disclose or suggest all of the claimed subject matter included in claim 1. Therefore, the proposed combination of Maillard, Morrison, and Wendorf also fails to disclose or suggest all of the claimed subject matter included in claim 12.

Further, Applicant's representatives fail to find in, and the Office Action fails to point out where the claimed subject matter included in claim 12 and missing from the proposed combination of Maillard, Morrison, and Wendorf is disclosed or suggested by Takahisa et al.

Thus, the proposed combination of Maillard, Morrison, Wendorf, and Takahisa et al. fails to disclose or suggest all of the claimed subject matter included in claim 12. Therefore, the 35 U.S.C. § 103 rejection of claim 12 cannot stand.

Also, and for at least the reasons stated above, one of ordinary skill in the art at the time of the invention would not be motivated to combine, Maillard, Morrison, and Wendorf. Therefore, the Office Action also fails to establish a proper basis for forming the proposed combination of Maillard, Morrison, Wendorf, and Takahisa et al., and so the Office Action fails to establish a *prima facie* case of obviousness with respect to claim 12.

For at least the reasons stated above, Applicant respectfully requests withdrawal of the rejection, and reconsideration and allowance of claim 12.

New Claims 17-20

Applicant submits that for at least the reasons stated above, new claims 17-20 are not anticipated by and are not obvious in view of any and all combinations of the cited documents used in rejecting pending claims 1-16 in the Office Action, and therefore respectfully requests notification of allowance of new claims 17-20.

Reservation of Rights

Applicant does not admit that references cited under 35 U.S.C. §§ 102(a), 102(e), 103/102(a), or 103/102(e) are prior art, and reserves the right to swear behind them at a later date. Arguments presented to distinguish such references should not be construed as admissions that the references are prior art.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at 612-371-2132 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

ANDREW AUGUSTINE WAJS

By his Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
408-278-4042

Date DECEMBER 18/2006 By Robt B. Madden

Robert B. Madden
Reg. No. 57,521

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 18 day of December 2006.

Dawn R. Shaw — Dawn R Shaw

Name — Signature